

Gene Expression Profiling Databases on target cells vs. counterpart

Fig. 16



PROCESS STEP

EXAMPLES

Cell Set



Vector Tag



Measurement



PCR



Sequencing



Database



colon cancer/vs.
normal colon cells

or

lung cancer /vs.
normal lung epithelium

or

young organism cell set/vs.
old organism cell set

MMLV w/
hrGFP

or

 $\alpha(1,3)$ galactosyltransferase

or

DNA transfection

FACS scan for hrGFP fluorescence
or
ELISA for hrGFP protein
or
FACS scan for $\alpha(1,3)$ GT induced α -gal Ag
or
ELISA of $\alpha(1,3)$ GT protein
or
use of magnetic field or chemiluminescence
or
enzymatic reaction for protein quantitation

STARS
or
SAVI
or
PCR

pyro sequencing
or
AB1 Machine Sequencing
or
sequencing

cancer cells database
or
normal cell database

Fig. 18A

PROCESS STEP

Search Process



Comparative
Proteonomics



Pathway
Analysis



Target
Validation/
Diagnostics



Drug
Development

EXAMPLES

Parallel BLAST search EST
or
Search Genome database full sequence to define intron/exon
or
Alternative splicing database

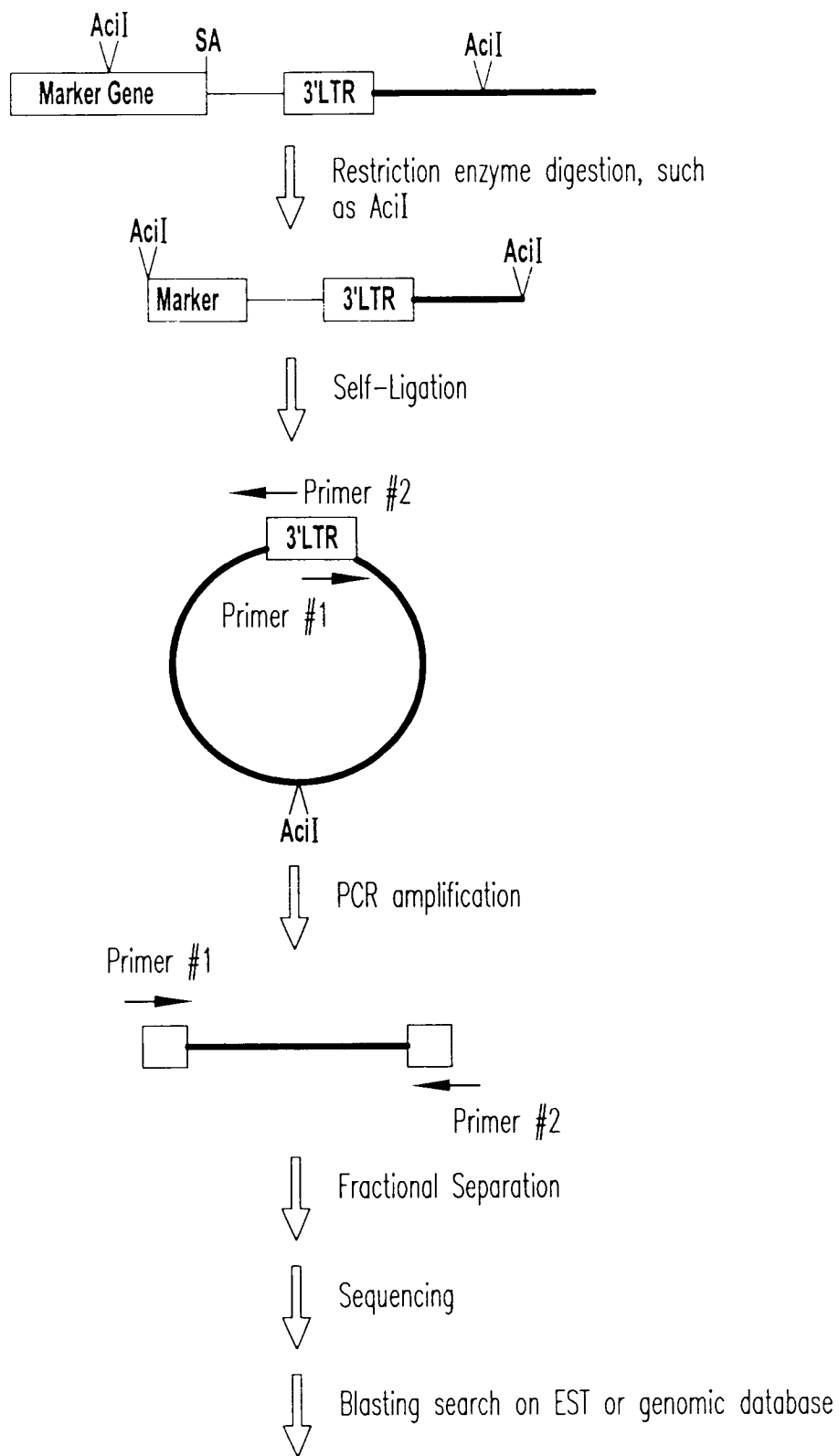
Compare colon cancer cell to normal colon epithelium
or
Compare lung cancer cell to normal lung cell

multigene co-variant
or
Specific cell circuit analysis e.g. cell cycle

Monoclonal Ab diagnostics Northern analysis, Western analysis
or
DNA assay/gene chip comparison
or
SNP Associations
or
Yeast 2-hybrid fishing for protein partner

monoclonal Antibody treatment
or
small molecule library search and/or
treatment
or
gene therapy
or
anti-sense
or
Ribozyme
or
any other conventional
pharmaceutical drug development

Fig. 18B



Gene Expression Profiling Databases on target cells vs. counterpart

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STARS

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or

PCR

Sequencing



pyro sequencing

or

AB1 Machine Sequencing

or

sequencing

Database

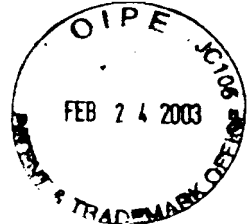


cancer cells database

or

normal cell database

Fig. 18A



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Comparative
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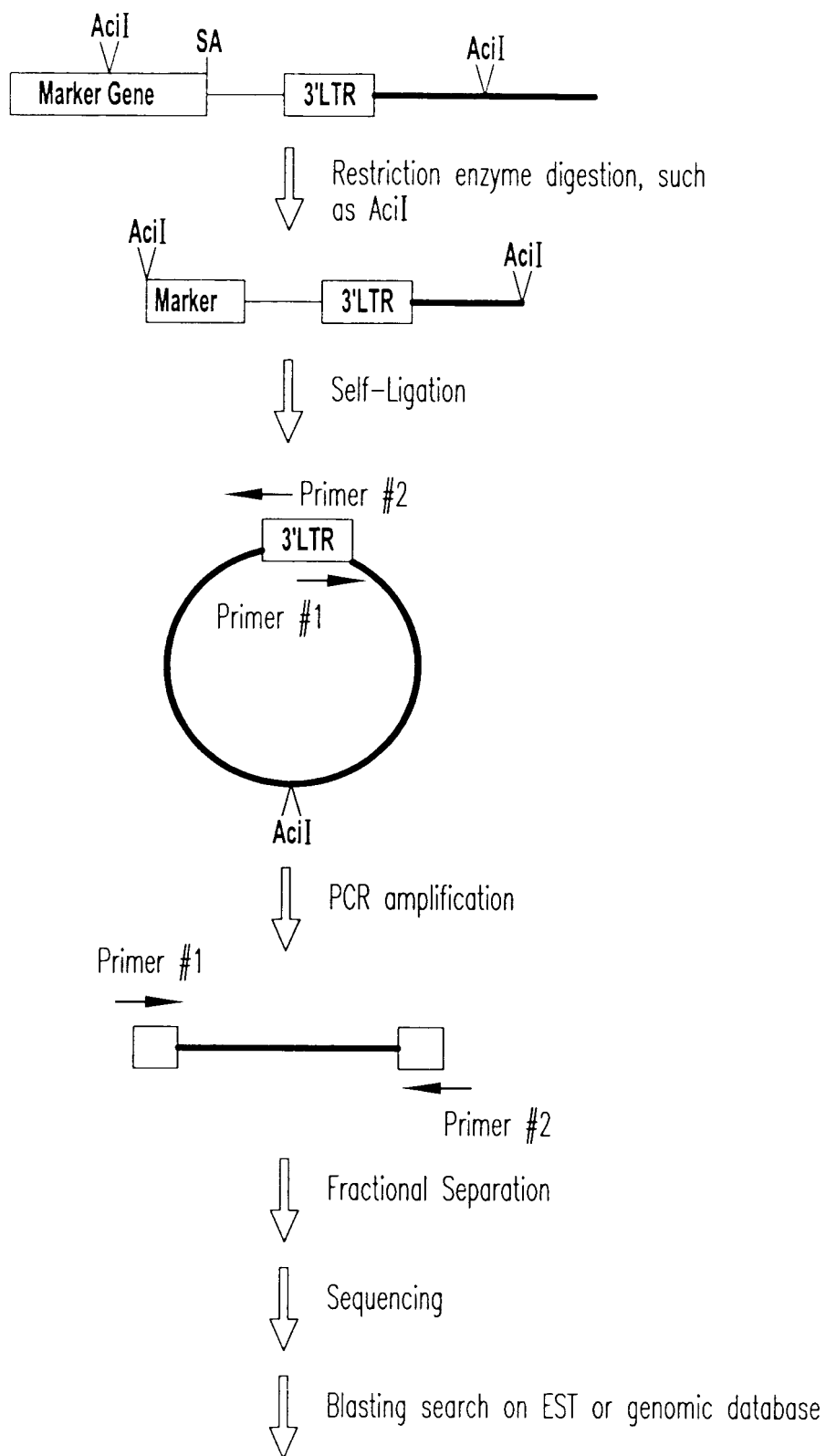
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Fig. 18B



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STARS
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Sequencing



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cancer cells database
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Fig. 18B